

Amendment to the Specification:

Please replace the title with the following amended title:

High-Speed, High-Sensitivity Charge-Coupled Device With Independent Pixel Control of Charge Collection and Storage

Please replace paragraph [0047] with the following amended paragraph:

[0047] During operation of the imaging array, after collection of a specified sequence of image frames, the subpixel biases can be adjusted to extend the depletion region of the charge drains of the subpixels for draining of any charge that is further generated or that remains in the substrate, e.g., due to continued illumination of the substrate, or due to incomplete capture of previously photogenerated charge. In this scenario, as shown in [Fig. 3B] Fig. 3D, the applied shutter drain voltage, V_{SD} , is increased above that applied in the “open” shutter mode, to produce shutter drain depletion regions 68 that extend vertically below the p-type buried layer deeper into the bulk of the substrate. Photoelectrons generated in the substrate are attracted to the more positive potential of these shutter drain depletion regions rather than the contracted collection region 66. As shown in Fig. 2A, the shutter drains 62 are connected for draining of this charge from the subpixel location in the substrate. In this control state, the subpixel maintains its fixed store of previously-collected charge and drains any additional charge from the substrate.